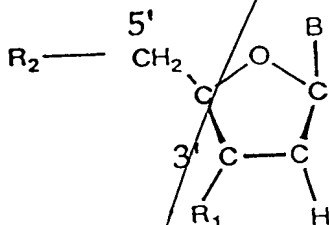


Claims

1. A nucleoside 5'-phosphate having a removable blocking moiety protecting the 3' position which is selected from the group consisting of esters, ethers, carbonitriles, phosphates, carbonates, carbamates, borates, nitrates, sugars, phosphoramidates, phenylsulfenates, sulfates, sulfones, wherein said removable blocking moiety is linked to the 3' carbon of said nucleoside 5'-triphosphate.

2. A nucleoside 5'-phosphate having a removable blocking moiety protecting the 3' position having the following formula:



wherein R₂ is triphosphate, diphosphate or monophosphate; and wherein R₁ is selected from the group consisting of phosphate, phosphoramidate and phosphoramide.

B 3. The nucleoside 5' phosphate of claim 2
wherein R2 is triphosphate and R1 is phosphate.

a 4. The nucleoside 5'-phosphate of claim 2
wherein said removable blocking moiety is removable by an
5 enzyme.

C 5. The nucleoside 5'-^{+triphosphate}~~phosphate~~ of claim 2
wherein said removable blocking moiety is removable by a
reaction which occurs within 2 to 10 minutes.

C 6. The nucleoside 5'-^{+triphosphate}~~phosphate~~ of claim 2
10 wherein said removable blocking moiety is linked to a
solid support.